[ 2016 SCI DATA SUMMARY ]

# A Look at Traumatic Spinal Cord Injury in Canada: Rick Hansen Spinal Cord Registry (RHSCIR)

This data summary provides brief clinical and demographic details on people who sustained a traumatic spinal cord injury (SCI) in **2016** in Canada. RHSCIR is a prospective registry of patients with a new traumatic SCI from 18 acute and 13 rehabilitation hospitals specializing in SCI care across Canada. RHSCIR includes more than 6,000 participants, making it the largest registry that tracks the experiences of individuals living with traumatic SCI in Canada. For a more in-depth report for 2016 and previous years, and more details on RHSCIR, visit rickhanseninstitute.org.

## INCIDENCE

In 2016, there were **660 new RHSCIR participants**. RHSCIR captures **60-70% of all acute traumatic SCI** in Canada based on comparisons with other national data sources (Canadian Institute for Health Information).[1]

## PREVALENCE

In Canada, over **86,000 people live with SCI** (44,000 with traumatic SCI).[2] For traumatic SCI, the estimated average lifetime cost is **$2 million per individual**.[3] This includes direct costs such as hospital stay and indirect costs such as lost productivity due to premature mortality.

## DEMOGRAPHICS

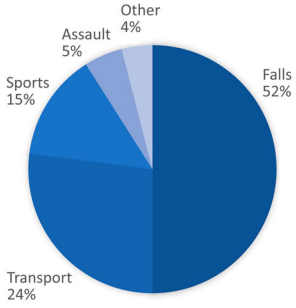
The average age at injury was **53 years old**.

**74%** of RHSCIR participants were **male.**

## CAUSE

The most common cause of injury was falls, such as a slip on the sidewalk or a fall from an apartment balcony.

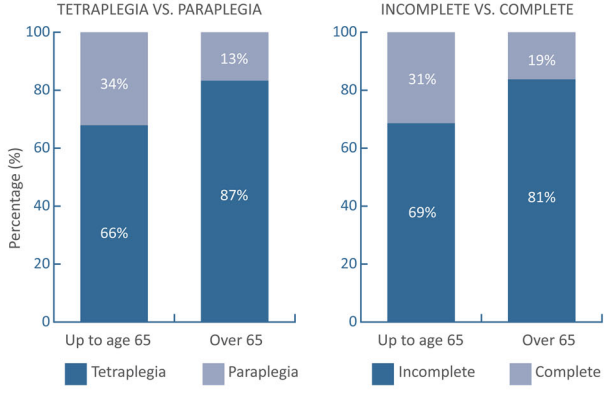
The average age for people who experienced a **fall** was **61 years old**; **45 years old** for **transport**; **40 years old** for **sports**; and **33 years old** for **assault**.




## SEVERITY AND LEVEL OF INJURY

**Tetraplegia was more common** than paraplegia among RHSCIR participants for all age groups.

Incomplete injuries were more common than complete injuries. For individuals over 65 years old, **incomplete tetraplegia** was more prevalent which may be due to the nature of the injury (such as a fall from standing height).




## ADMISSION LOCATIONS

**81%** of RHSCIR participants were admitted to a SCI-specialized acute hospital within 24-hours from injury regardless of whether they first went to a non-specialized hospital.

**62%** of individuals admitted to a SCI-specialized acute hospital then went on to a SCI-specialized rehabilitation centre before returning to the community. Mortality during the initial SCI-specialized acute hospital stay was **8%.**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## LENGTH OF STAY

The average number of days spent in acute care following a traumatic SCI was **24 days for individuals with paraplegia** and **34 days for individuals with tetraplegia**. The average length of stay for those who were admitted to a SCI-specialized rehabilitation centre was **72 days for paraplegia** and **83 days for tetraplegia.**

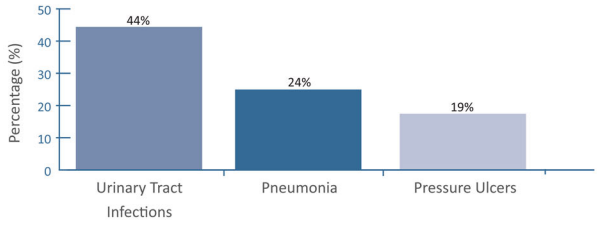
## CHANGE IN EMPLOYMENT STATUS, HOUSEHOLD INCOME AND RELATIONSHIP STATUS

Five years post-injury, just under half of individuals who were employed at the time of injury were unemployed and just over one third saw a decline in income. Relationship status did not appear to be significantly impacted.

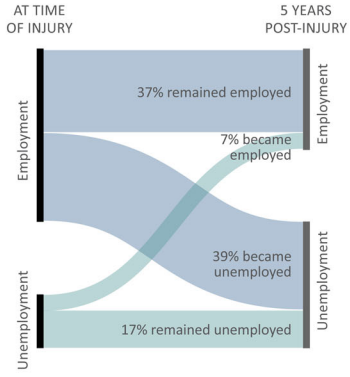
## FREQUENCY OF SECONDARY COMPLICATIONS

Urinary tract infections were the most common secondary complication in hospital, followed by pneumonia, then pressure ulcers. **58%** of participants reported the occurrence of at least one of these complications and **20%** reported multiple secondary complications during acute and/or rehabilitation stays.

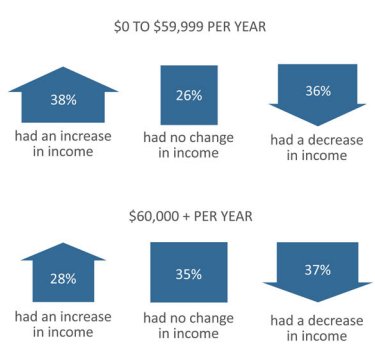
SECONDARY COMPLICATIONS DURING ACUTE AND/OR REHABILITATION CARE



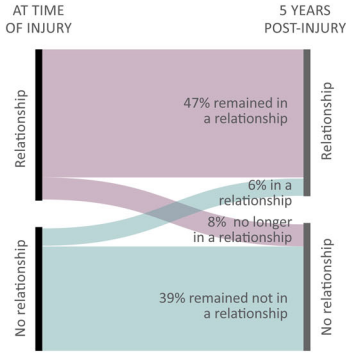

CHANGE IN EMPLOYMENT STATUS FIVE YEARS POST–INJURY




CHANGE IN HOUSEHOLD INCOME FIVE YEARS POST–INJURY




CHANGE IN RELATIONSHIP STATUS FIVE YEARS POST–INJURY




References

1. Noonan, V.K., Chan, E., Santos, A., Soril, L., Lewis, R., Singh, A., Cheng, C.L., O'Connell, C., Truchon, C., Paquet, J., Christie, S., Ethans, K., Tsai, E., Ford, M., Drew, B., Linassi, A.G., Bailey, C.S., Fehlings, M.G., and the RHSCIR Network. (2017). Traumatic spinal cord injury care in Canada: A survey of Canadian centres. J Neurotrauma. Epub ahead of print.
2. Noonan, V.K., Fingas, M., Farry, A., Baxter, D., Singh, A., Fehlings, M.G., and Dvorak, M.F. (2012). Incidence and prevalence of spinal cord injury in Canada: a national perspective. Neuroepidemiology 38, 219–26.
3. Krueger, H., Noonan, V.K., Trenaman, L.M., Joshi, P., and Rivers, C.S. (2013). The economic burden of traumatic spinal cord injury in Canada. Chronic Dis. Inj. Can. 33, 113–22.

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*The Rick Hansen Institute is a Canadian-based not-for-profit organization with the goal of creating a world without paralysis after spinal cord injury. It works towards this goal by accelerating research and translating clinical findings into practical solutions to develop new treatments, improve health care outcomes, reduce long-term costs and improve the quality of life for those living with spinal cord injury. www.rickhanseninstitute.org*

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